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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/574,057	03/29/2006	Jean-Luc Veron	12928/10029	7991
23280	7590	06/04/2009		
Davidson, Davidson & Kappel, LLC 485 7th Avenue 14th Floor New York, NY 10018			EXAMINER MONDT, JOHANNES P	
			ART UNIT 3663	PAPER NUMBER
			MAIL DATE 06/04/2009	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/574,057

Applicant(s)

VERON, JEAN-LUC

Examiner

JOHANNES MONDT

Art Unit

3663

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 February 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 23-33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 23-33 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 February 2009 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/S5108)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

1. Amendment filed 2/20/09 forms the basis for this Office action. In said Amendment applicant canceled all claims 12-22 previously pending (claims 1-11 had previously been canceled) and introduced once again new claims 23-22. Comments on Remarks submitted with said Amendment are included below under "Response to Arguments".

Drawings

2. The drawings for replacement Sheet 1/1, New Sheet 1/2 and New Sheet 2/2 were received on 2/20/09. These drawings are objected to as follows (see also Specification objection in this Office action):
3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the structure 20 (Figure 4) constitutes both a loading structure and a support structure, both being currently claimed separately, yet both being identified with a single reference character (20) while the loading structure has no reference character in the original specification through which it is identified. Hence the loading structure has not been shown separately from the support structure, although they are separately claimed (see line 10 of claim 1 for "loading structure" and see line 22 of claim 1). Said loading structure must be shown or the feature canceled from the claims. No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended

replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

4. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference characters "6a" and "6b" have both been used to designate what appear to be the same part, although in the text of the specification 6a are the pellets, 6b the cladding. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and

informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

5. The amendment filed 2/20/09 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: the topographic feature of the warehouse 200, both in its external shape as well as in the apparent square-matrix form in which the capsules 8 and covers 201 are arranged within said warehouse 200, in new Sheet 2/2, constitutes new matter.

Applicant is required to cancel the new matter in the reply to this Office Action.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

7. ***Claim 23-31*** are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claims contain subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor, at the time the application was filed, had possession of the claimed invention. In particular, the specification does not support with a written description the "loading structure" and the "support structure" newly

claimed jointly (see lines 10 and 22, respectively). Instead, the specification specifically discloses both loading structure and support structure by reference character 20 (Figure 4) and states unequivocally that "Figure 4 illustrates a structure 20 constituting both a loading structure and a support structure for capsules ..." (substitute specification, page 12, lines 33-37; and see original specification, lines 26-28 of page 11) and does not distinguish between said loading structure and said support structure. Therefore, the specification fails to provide written support for the separately claimed loading structure and support structure. Accordingly, the new claims 23-31 constitute new matter.

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. **Claims 23-31** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The metes and bounds of the claimed invention are vague and ill-defined due to a lack of a written description for the separately claimed loading structure and support structure as set forth above in section 5.

10. **Claims 23-31** through claim 23 recite the limitation "subsequent" in line 2. There is insufficient antecedent basis for this limitation in the claim in the case when "for at least one of transport and subsequent storage of at least 50 years" is storage only, because then said storage is not "subsequent".

11. **Claim 32** recites the limitation "subsequent" in line 2. There is insufficient antecedent basis for this limitation in the claim in the case when "for at least one of

transport and subsequent storage of at least 50 years” is storage only, because then said storage is not “subsequent”, because there is not necessarily any transport involved.

12. **Claim 33** recites the limitation “subsequent” in line 2. There is insufficient antecedent basis for this limitation in the claim in the case when “for at least one of transport and subsequent storage of at least 50 years” is storage only, because then said storage is not “subsequent”, because then said storage is not “subsequent”, because there is not necessarily any transport involved.

Claim Rejections - 35 USC § 103

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. **Claim 32** is rejected under 35 U.S.C. 103(a) as being unpatentable over Kraus et al (DE 196 40 393 A1 (see IDS), in view of Applicant's Admitted Prior Art (Specification, page 1) and Georii (WO03/065380 A1). The rejection is offered strictly subject to the noted indefiniteness under 35 USC 112, second paragraph, as detailed above in section 7, and is provided to the best of examiner's understanding, with assumptions noted as Examiner Notes below. N.B.: The examiner has ordered a translation of Kraus et al into English from the Office (Translations Branch of the U.S. P.T.O.), which will be mailed to applicant at the earliest possible time.

Kraus et al teach a method of packaging leaky fuel rods (col. 1, lines 3-38) for at least one of transport and storage, namely: for transport (col. 1, l. 55-63), each leaky fuel rod containing fuel material in tubular cladding ('Hüllrohr' 12a) (col. 3, l. 20) and being closed at ends of the tubular cladding and presenting a sealing defect (by virtue of being leaky ("schadenhaft", col. 1, l. 24). The limitation on where the leaky fuel rods come from ("each leaky fuel rod coming from at least one fuel assembly") does not limit the method, but instead the intended use of the method. In this regard applicant is reminded that Applicant is reminded that intended use and other types of functional language must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art, which in this case it does not, considering that the fuel rod in Kraus is taken from a PWR reactor (col1. 2, l. 33+). In re Casey, 152 USPQ 235 (CCPA 1967); In re Otto, 136 USPQ 458, 459 (CCPA 1963). Furthermore, Kraus et al teach their method to comprise:

making available a capsule 7, *capable* to receive a single leaky fuel rod, and comprising a tubular sheath 8 (col. 3, l. 8-14) and two end plugs 9 and 10 (col. 3, l. 8-14), at least one of the two end plugs configured to be removable [Examiner Note: although the claimed invention is a method, the instant limitation "configured...." limits a structure, i.e., the "at least one of the two end plugs", and as such constitutes a limitation of possible intended use only. Applicant is reminded that intended use and

other types of functional language must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. In re Casey, 152 USPQ 235 (CCPA 1967); In re Otto, 136 USPQ 458, 459 (CCPA 1963). In the end plug 9 a screw pattern is present, and hence the limitation of capability of being removed is met];

placing a loading structure 40 ("Köcher", i.e., quiver) in the pool (col. 4, l. 34+; Figure 4), in a disposition enabling the loading structure to receive at least one capsule with longitudinal axis in vertical position (in the vertical position defined as axial with respect to the fuel assembly), the loading structure having an open top end 53 ("Köcheröffnung", i.e., quiver opening: see col. 4, l. 58+);

securing on the open top end of the loading structure a device 54 ("Flansch mit Richtvorrichtung", i.e., flange with provision to point or direct) capable of being used for loading a fuel rod into the capsule (Figure 4: col. 4, l. 58 – col. 5, l. 14), said device 54 having an opening ("Durchtrittsöffnungen" 59/60 or any single one thereof: see loc.cit. and col. 5, l. 2-43) and guide device "Richtvorrichtung", including "Richtrollen" (guiding rollers) 57/58; col. 4, l. 63 – col. 5, l. 14) *capable* of being placed at the opening of device 54;

inserting said leaky fuel rod 12 coming from a fuel assembly (Figure 1 and col. 2, l. 33-59) into an empty capsule 7 (see Figure 1 where fuel rods 6 and capsules 7 are

illustrated) in the loading structure at one loading location (by definition the location at which the loading is conducted is the "loading location"), said inserting including: once ensuring an open position of plug 9 of capsule 7, inserting a defective rod into the capsule 7 via a guide device placed at the opening of the loading device (56-58: see Figure 4 and col. 4, l. 58 – col. 5, l. 14), and screwing the plug at the top end of the capsule into or back into place (col. 5, l. 52-55).

Kraus et al do not necessarily teach any of limitations on depositing the leaky fuel rods in a pool, making available a plurality of capsules and corresponding leaky rods as recited and unscrewing a plug of the capsule as a means to ensure the latter is in said open position.

However, it would have been obvious to include all of the other limitations not taught explicitly by Kraus in view of Georii, who, in a patent document on a container device for shipping (i.e., transport) of radioactive fuel for nuclear reactors (page 1, lines 1-10), hence analogous art, teaches a device 10 for intermediate containment with a "very high degree of safety against leakage" (see abstract and [0036]), and with room for a plurality of capsules 11 (page 3, lines 26+). One of ordinary skill in the art would have considered it obvious to use the device of Georii et al for a plurality of leaky fuel rods contained in capsules of the type of Kraus so as to transport a plurality rather than a single one of said capsules. Motivation derives from the economy of scale involved in transporting a plurality with a single loading structure rather than with as many as there are capsules; while it would have been obvious to one of ordinary skill in the art to

unscrew a plug if said plug provides access to the interior of the capsule to be filled with said leaky fuel.

In conclusion, claim 32 is unpatentable over Kraus et al in view of Applicant's Admission of Prior Art (Specification, page 1) and Georii et al.

15. **Claim 33** is rejected under 35 U.S.C. 103(a) as being unpatentable over Kraus et al (DE 196 40 393 A1 (see IDS), in view of Applicant's Admitted Prior Art (Specification, page 1) and Georii (WO03/065380 A1). The rejection is offered strictly subject to the noted indefiniteness under 35 USC 112, second paragraph, as detailed above, and is provided to the best of examiner's understanding, with assumptions noted as Examiner Notes below. N.B.: The examiner has ordered a translation of Kraus et al into English from the Office (Translations Branch of the U.S. P.T.O.), which will be mailed to applicant at the earliest possible time.

Kraus et al teach a method of packaging leaky fuel rods (col. 1, lines 3-38) for at least one of transport and storage, namely: for transport (col. 1, l. 55-63), each leaky fuel rod containing fuel material in tubular cladding ('Hüllrohr' 12a) (col. 3, l. 20) and being closed at ends of the tubular cladding and presenting a sealing defect (by virtue of being leaky ("schadenhaft", col. 1, l. 24). The limitation on where the leaky fuel rods come from ("each leaky fuel rod coming from at least one fuel assembly") does not limit the method, but instead the intended use of the method. In this regard applicant is reminded that intended use and other types of functional language must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is

capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art, which in this case it does not, considering that the fuel rod in Kraus is taken from a PWR reactor (col1. 2, l. 33+). In re Casey, 152 USPQ 235 (CCPA 1967); In re Otto , 136 USPQ 458, 459 (CCPA 1963). Furthermore, Kraus et al teach their method to comprise:

making available a capsule 7, *capable* to receive a single leaky fuel rod, and comprising a tubular sheath 8 (col. 3, l. 8-14) and two end plugs 9 and 10 (col. 3, l. 8-14), at least one of the two end plugs configured to be removable [Examiner Note: although the claimed invention is a method, the instant limitation "configured..." limits a structure, i.e., the "at least one of the two end plugs", and as such constitutes a limitation of possible intended use only. Applicant is reminded that intended use and other types of functional language must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. In re Casey, 152 USPQ 235 (CCPA 1967); In re Otto , 136 USPQ 458, 459 (CCPA 1963). In the end plug 9 a screw pattern is present, and hence the limitation of capability of being removed is met];

placing a loading structure 40 ("Köcher", i.e., quiver) in the pool (col. 4,, l. 34+; Figure 4), in a disposition enabling the loading structure to receive at least one capsule

with longitudinal axis in vertical position (in the vertical position defined as axial with respect to the fuel assembly), the loading structure having an open top end 53 ("Köcheröffnung, i.e., quiver opening; see col. 4, l. 58+);

securing on the open top end of the loading structure a device 54 ("Flansch mit Richtvorrichtung", i.e., flange with provision to point or direct) capable of being used for loading a fuel rod into the capsule (Figure 4: col. 4, l. 58 –col. 5, l. 14), said device 54 having an opening ("Durchtrittsöffnungen" 59/60 or any single one thereof; see loc.cit. and col. 5, l. 2-43) and guide device "Richtvorrichtung", including "Richtrollen" (guiding rollers" 57/58; col. 4, l. 63 – col. 5, l. 14) *capable* of being placed at the opening of device 54;

inserting said leaky fuel rod 12 coming from a fuel assembly (Figure 1 and col. 2, l. 33-59) into an empty capsule 7 (see Figure 1 where fuel rods 6 and capsules 7 are illustrated) in the loading structure at one loading location (by definition the location at which the loading is conducted is the "loading location"), said inserting including: once ensuring an open position of plug 9 of capsule 7, inserting a defective rod into the capsule 7 via a guide device placed at the opening of the loading device (56-58: see Figure 4 and col. 4, l. 58 – col. 5, l. 14), and screwing the plug at the top end of the capsule into or back into place (col. 5, l. 52-55); since the quiver is placed in the pool and the capsule is placed in the quiver while the leaky fuel rod is placed in the capsule the leaky fuel rods are deposited in the pool (hence the limitation on line 3 of claim 33 is met).

Kraus et al do not necessarily teach any of limitations on depositing the leaky fuel rods in a pool, making available a plurality of capsules and corresponding leaky rods as recited and unscrewing a plug of the capsule as a means to ensure the latter is in said open position.

However, it would have been obvious to include all of the other limitations not taught explicitly by Kraus in view of Georii, who, in a patent document on a container device for shipping (i.e., transport) of radioactive fuel for nuclear reactors (page 1, lines 1-10), hence analogous art, teaches a device 10 for intermediate containment with a "very high degree of safety against leakage" (see abstract and [0036]), and with room for a plurality of capsules 11 (page 3, lines 26+). One of ordinary skill in the art would have considered it obvious to use the device of Georii et al for a plurality of leaky fuel rods contained in capsules of the type of Kraus so as to transport a plurality rather than a single one of said capsules. Note that the device of Georii is also intended for transport ('shipping containers') (see page 9, line 25+). *Motivation* derives from the economy of scale involved in transporting a plurality with a single loading structure rather than with as many as there are capsules; while it would have been obvious to one of ordinary skill in the art to unscrew a plug if said plug provides access to the interior of the capsule to be filled with said leaky fuel.

In the combined invention, moving each capsule containing the leaky fuel rod from the loading location to a different storage location is met because the location of the quiver is not the same as the location of the container device 10 of Georii, while during the storage of the capsules as capsules 11 in Georii's device when used as a

shipping container "storing and transporting the leaky fuel rods inside the capsules while in the storage location" is met.

In conclusion, claim 33 is unpatentable over Kraus et al in view of Applicant's Admission of Prior Art (Specification, page 1) and Georii et al.

Response to Arguments

16. Applicant's arguments filed 2/20/09 have been fully considered but they are not fully persuasive. Applicant canceled all claims and added new claims 23-33. Although several issues of 35 U.S.C. 112, 1st and 2nd paragraph have been overcome by amendment, the previous Drawings objections have been overcome only partly (see "Drawings" above), and both an objection of the Drawings, an objection to the Specification, and rejections under 35 U.S.C. 112, 1st paragraph and 2nd paragraph, are necessitated by the new claim language. Furthermore, where sufficiently understandable (claims 32-33) but still subject to the noted indefiniteness under 35 U.S.C. 112, second paragraph, art rejections are provided based on Kraus et al and Applicant's Admitted Prior Art (both as cited previously), in view of Georii (WO 03/065380 A1).

Conclusion

17. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JOHANNES MONDT whose telephone number is (571)272-1919. The examiner can normally be reached on 8-17.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack W. Keith can be reached on 571-272-6878. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/JOHANNES MONDT/
Primary Examiner, Art Unit 3663